tion to the host, saying that they are first formed as the result of a mechanical stimulus, and that by means of a poisonous secretion they injure the tissue, draw nourishment from it, and as soon as this is obtained send out branches which for the most part do not penetrate the host directly, but spread over the surface surrounding the organ. Later Marshall Ward[4] described their development, and speaks of them as being "of the same morphological nature as those figured by Brefeld in *Peziza sclerotiorum*, and explained by De Bary subsequently as organs of attachment," while J. E. Humphrey[5] describes them as compact cellular masses which cling closely to the surface with which they are in contact, but that their real significance is not yet understood. —MARGARETHA E. C. HORN, *University of Michigan.*

EXPLANATION OF PLATE XVII.

Fig. 1. A branch of an upright hypha bearing conidia.
Fig. 2. Young developing conidiophore with small projections at *a*, and mature conidia at *b*.
Figs. 3–6. Successive stages of a developing organ of attachment.
Fig. 7. A prostrate branch bearing mature conidia at *a* and a young organ of attachment at *b*.
Fig. 8. Hypha entering a leaf of geranium through the stoma.
Fig. 9. Germ tubes penetrating the host between the lamellæ of two adjacent cells.

NEW WEST VIRGINIA LICHENS.

Lecidea Virginiensis Calk. & Nyl., sp. nov.—Thallus glaucescens tenuis laevigatus rimulosus citrino-flavus; apothecia fusca aut nigra convexiuscula immarginata latit. circ. 0.5^{mm}, intus medio sordida; spora oblonga incoloris, long. 0.009–0.012, crass. $0.004–6^{mm}$; epithecium et pars media hypothecii dilute fuscescens. In toto gelatina hymenialis coerulescens, dein theca vinose rubescens.

E stirpe videtur *Lecidea sanguineo-atra*, prope *Lecideam delineatam* Nyl.

On sandstone rock under the drip of a wet cliff. West Virginia, near Nuttallburg, L. W. Nuttall coll. no. 1779. *Flora of West Virginia*, Millsp. & Nutt., 181.

[4] Ann. Bot. **2**: 327. 1888.

[5] Ninth Ann. Rept. 1891 and Tenth Ann. Rept. 1892. Mass. Agr. Exp. Station.

Lecidea Nuttallii Calk. & Nyl., sp. nov.—Apothecia nigra parva; epithecium impressum; spora fusca oviformis 1-septata, long. 0.014–16, crass. 0.005–6^{mm}; hypothecium fuscum. In toto gelatina hymenialis vinose rubescens.

Super thallum *Ricasolia sublævis* Nyl. West Virginia, near Nuttallburg, L. W. Nuttall coll. no 1781. *Flora of West Virginia*, Millsp. & Nutt., 181.

Arthonia aleuromela Nyl., sp. nov.—Thallus albus subfarinaceus chrysogonidicus tenuissimus; apothecia subrotundata vel oblonga, prominula, latit. 0.4–0.5^{mm}; spora oblongo-oviformis parte inferiore attenuata, 1-septata, long. 0.010–11, crass. 0.003^{mm}. In toto gelatina hymenialis cœrulescens, dein obscurata.

Thallus detritus subaureus, CaCl vix reagens. Gonidia chroolepoidea fulvescentia.

On bark of *Quercus sp.* West Virginia, near Nuttallburg, alt. 2000 feet, L. W. Nuttall coll. no 1182. *Flora of West Virginia*, Millsp. and Nutt., 182.

Lecanora deplanans Nyl., sp. nov.—Thallus glauco-cinerascens tenuis areolato-rimosus determinatus; apothecia badio-rufescens (satis diluta) innata subconcaviuscula, latit. 0.5–0.7^{mm}; spora ellipsoidea, long. 0.015–16, crass. 0.009–1.010^{mm}; epithecium inspersum. In toto gelatina hymenialis fulvo-rubescens.

Videtur species e stirpe *Lecanora cervina*, spermatiis ellipsoideis.

On rocks in bed of creek. West Virginia, Short Creek, alt. 1300 feet, L. W. Nuttall coll. no. 1126. *Flora of West Virginia*, Millsp. & Nutt. 178.—C. F. MILLSPAUGH, *Field Columbian Museum, Chicago*, and L. W. NUTTALL.